ASSIGNMENT: LOOPS (NO NESTED LOOPS)

Instructions:

1   Use only one loop (no nested loops).
2   Language: Java
3   Write clean and readable code.
4   Add proper comments.

Part 1: Basic Loop Practice

1   Print numbers from 1 to N.
2   Print numbers from N to 1.
3   Print first N natural numbers.
4   Print all even numbers between 1 and N.
5   Print all odd numbers between 1 and N.
6   Print multiplication table of a given number.

Part 2: Sum & Count Based Questions

1   Find sum of first N natural numbers.
2   Find sum of even numbers between 1 and N.
3   Count digits in a given number.
4   Find sum of digits of a number.
5   Count even and odd digits in a number.

Part 3: Number Logic (Interview Important)

1   Reverse a given number.
2   Check whether a number is Palindrome.
3   Check whether a number is Prime.
4   Find factorial of a number.
5   Check whether a number is Armstrong.

Part 4: Conditional Logic with Loop

1   Find the largest digit in a number.
2   Find the smallest digit in a number.
3   Check if a number is divisible by 3 and 5.
4   Print all factors of a number.
5   Check whether a number is Perfect Number.

Bonus Questions

1   Count number of zeros in a number.
2   Check if a number is Duck Number.
3   Find product of digits of a number.